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ORIGINAL ARTICLES.

NEW TREATMENT FOR OPTIC ATROPHY BY THE COMBINED USE OF GLONOIN AND STRYCHNINE, WITH A REPORT OF TWO CASES CURED

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OCULIST TO U. S. PENSION BUREAU; CITY HOSPITAL; C. & M., V. & B., Z. & C. RY'S, ETC.

CASE I.—March 1, 1896. Mr. L. W., age 56. Retinoscopy shows +2 D. sp. required in each eye. With this glass V. Rem. R. E.=$^{5}/_{36}$ in the outer half of the field only. L. E. =$^{5}/_{36}$ on inner half of the field only. V.$_{2}$=$^{5}/_{36}$. Pupillary reaction to light in all parts of the field is sluggish; normal reaction in accommodation. Oph. ex. R. E. Disc hazy from severe papillitis, its margins obscured and somewhat cupped; veins greatly engorged, and arteries too fine. L. E. Inner half of disc hazy, outer half pale and showing marked atrophic cupping; veins greatly enlarged, arteries too fine; urine normal; no rheumatism, gout, syphilis or alcoholism. Patient smokes eight pipes of tobacco a day. No lead poison or sunstroke. He was struck on the right orbital arch by a buzz-saw two years ago and knocked unconscious.

He was given iodide of potash and mercurial inunctions, and $^{1}/_{15}$ gr. strychnia *ter die* internally. March 10. Same treatment with $^{1}/_{30}$ gr. strychnia injected into the temple, and

the strychnia internally ordered stopped. March 18–21. Injections of $^{1}/_{15}$ gr. strychnia. March 22. Injection of $^{1}/_{12}$ gr. strychnia. March 24. Injection of $^{1}/_{10}$ gr. strychnia nit. V.$_{2}$ Rem. = $^{5}/_{24}$ V. prox = $^{2\cdot}/_{\cdot 30}$ Sn. March 27 to April 5. Hypodermic injections of $^{1}/_{10}$ gr. strychnia, and comp. syrup hypophosphites *ter die* internally. April 5. Oph. ex. R. E. Veins enlarged and tortuous; arteries too fine both on the disc and in the stroma (to 3d°). Disc very pale and showing deep atropic cupping in outer half, the inner half hazy.

L. E. The same condition, save arteries are a little larger in size. Iodide and mercury stopped. April 7 to 13. Hypodermic injection of $^{1}/_{10}$ gr. strychnia nit.; also internally $^{1}/_{100}$ gr. glonoin three times daily. After exhibition of the glonoin the vision improved form $^{5}/_{24}$ Rem. to $^{5}/_{12}$ Rem., and $^{2\cdot}/_{\cdot 30}$ Sn. to $^{1\cdot 2}/_{\cdot 30}$ Sn. The arteries of the retina increased in size; but the medicine did not give headache.

April 13 to 15. Strychnia stopped for several days and $^{1}/_{60}$ gr. of glonoin given internally. This produced fullness of the head. Oph. ex. shows that the retinal arteries are twice as large as when they were last examined.

April 17. Continued glonoin and gave injection of $^{1}/_{10}$ gr. strychnia nit.

April 19. V.$_{2}$=$^{5}/_{8}$; V. prox. = No. 6 Jaeger. Arteries normal in calibre in the left, and slightly diminished in size in the right eye. Small arteries of the disc, which were scarcely visible before the exhibition of the glonoin, are now normal in size. Vessels are now seen in all parts of the retina, and are only slightly diminished in size in the periphery.

April 21. V.$_{2}$=$^{5}/_{6}$; V. prox. = Jaeger No. 3. Arteries normal in size in both eyes; veins quite large. Same treatment.

April 24 to 28. V. Rem. $^{5}/_{8}$; V. prox. J. 3. $^{1}/_{50}$ gr. glonoin twice daily. Hypodermic injection of $^{1}/_{8}$ gr. strychnia nit.

April 28. V. Rem. $^{5}/_{8}$. Papillo-retinitis in both eyes. This accounts for the diminished V. Rem. The glonoin, by throwing too much blood into the retina, has caused the retinitis, hence it should not have been given so often, or in so large a dose, perhaps. I now stopped the glonoin and gave iodide potassium and mercurial inunctions. Strychnia nit. $^{1}/_{8}$ gr. hypodermically.

May 1. Same treatment. V.=$^{5}/_{8}$.

May 4. V.=$^{5}/_{6}$ nearly. Oph. ex. R. E. Retinal haze cleared. L. E. Slight papillary haze; arteries smaller than when taking glonoin Has not taken any glonoin for a week. Mercury and iodide stopped. Strychnia nit. $^{1}/_{7}$ gr. hypodermically.

May 7. V. Rem. $^{5}/_{6}$; V.$_{2}$ prox. J. No. 2.

May 8 to 9 No retinitis in the right eye and scarcely any in the left. I gave him hypodermically $^{1}/_{6}$ gr. strychnia nit. and ordered $^{1}/_{100}$ gr. glonoin *bis die*.

May 12 He sees several letters of the $^{4}/_{4}$ type, and several words of J. No. I.

CASE II.—Miss E. R., aged 28 years. With + .75 D. cy. at 90°=$^{5}/_{12}$. L. E.+4. D. cy. at 105°=$^{5}/_{24}$. Oph. ex. Disc very pale, and outer half cupped; vessels diminished in size. R. E. Disc hazy and very pale in color; inner half deeply cupped. Both arteries and veins too fine, both on disc and in stroma. Had optic neuritis in this eye 15 years ago, caused by eye-strain. The optic neuritis and resulting optic atrophy of the other eye were consecutive to this. No history of sunstroke, injury to head or back, or rheumatism. Reflexes normal.

March 18, 1896, I commenced hypodermic injections of strychnia nitrate $^{1}/_{40}$ gr., which were continued daily for three weeks, until I gave $^{1}/_{8}$ gr. At the end of the first week V. R. E=$^{5}/_{8}$ and $^{1.5}/_{.30}$ Sn. At the end of the second week V. R. E. =$^{5}/_{6}$ and $^{1.}/_{.30}$ Sn. At the end of the third week V. R. E.= $^{5}/_{5}$ and $^{6.}/_{.30}$ Sn. L. E. V.=$^{5}/_{24}$ and $^{4.}/_{.30}$ Sn.

The patient went home at this time, and I prescribed for her $^{1}/_{100}$ gr. of glonoin three times daily, and $^{1}/_{15}$ gr. strychnia sulphate twice daily internally. One week later she was ordered to take $^{1}/_{50}$ gr. glonoin morning and night, and $^{1}/_{10}$ gr. strychnia at noon.

One week later V. Rem. R. E.=$^{5}/_{5}$, L. E. $^{5}/_{24}$+; V. prox. R. E =No. I Jaeger, L. E.=No, VII Jaeger (improvement on glonoin from No. 4 Snellen to Jaeger VII in eighteen days). Oph. ex. R. E. Vessels are seen in all parts of the retina and the disc is not so pale and not so much cupped. L. E. Vessels can be seen in all parts of the retina and the disc is not so much cupped. There is no retinitis or papillitis in either eye, and the retinæ look bright and healthy throughout. The arteries are about normal in calibre. I ordered $^{1}/_{15}$ gr. strych-

nia sulphate *ter die*, and $^1/_{50}$ gr, glonoin morning and evening. A peculiar action of the glonoin in this case, as well as in the other, was the marked diminution of the cupping of the discs after it had been taken for a time.

Remarks.

In Case I, the V. Rem. had been brought up to $^5/_{24}$ by enormous doses of strychnine and then the improvement ceased, but immediately upon the exhibition of glonoin the vision rose rapidly in a few days. The same may be said of Case II. The ophthalmoscopic examination revealed beautifully the vaso-dilator action of the glonoin.

Heretofore the treatment, *par excellence*, of optic atrophy has been by strychnine. In optic atrophy the calibre of the arteries is always greatly diminished, thereby causing anæmia, loss of function, and subsequent atrophy of the nerve, or portions of the nerve and retina. We know that a small dose of strychnine contracts the arteries and stimulates the heart, and raises the blood-pressure, hence increases nutrition. Yet, we know that enormous doses of strychnine make the lumen of the vessels very small, hence must diminish the current going to the nerve; therefore glonoin is the remedy *par excellence*, because it counteracts the contraction of the retinal arteries which occurs in optic or retinal atrophy, but it also counteracts the over-contraction of the vessels caused by the strychnia, and at the same time by dilating the vessels allows strychnia to invest every particle of the nerve-tissue of the retina and optic nerve, which it could not do if the vessels were narrowly contracted or obliterated.

Strychnine undoubtedly stimulates the cerebro-spinal axis more than any known agent, but if optic atrophy is not a centrifugal symptom—as in locomotor ataxia—how could we expect to restore sight where the absence was due to narrowing or obliteration of the retinal or ophthalmic arteries, unless we could first dilate those arteries? Nitrite of amyl has long been used in this disease, and rightly used, but its effects are too transient. Glonoin is powerful and lasting, and not dangerous in its effects.

I noticed some time ago that glonoin aided the vision considerably in Bright's disease, but attributed this to its effect on the kidneys in eliminating urea and dilating vessels through-

out the body. Now I believe its beneficial effect in optic atrophy of Bright's disease to be due to its dilating effect on the arteries of the retina. This is a drug of which we can make use in several eye diseases. Let our ophthalmologists experiment with it, and report the results of their investigations. Try it in all forms of optic atrophy, retinitis pigmentosa, hereditary atrophy, atrophic choroiditis, the amblyopias, psychical blindness, quinine, lead, tobacco and all the toxic amblyopias, either alone or combined with strychnia. I believe that if it is used in retinitis pigmentosa, conjoined with strychnia, some remarkable results may follow.

It might be advisable, in some cases, to try minute doses of glonoin hypodermatically in the temple and, if well borne, to increase the dose. In this way it passes more directly into the retinal circulation, and might dilate some arteries that would not respond to internal treatment.

This drug may have been used in all these diseases, but after a careful search over a large amount of ophthalmic literature, I fail to find any mention of its use.

Antipyrin has been highly recommended for this disease; I have not used it myself, but theoretically it would be contraindicated, because of its depressing effect on the heart and circulation.

Electricity is beneficial, but it is a much over-lauded remedy.

In using glonoin it should be gradually pushed to its full physiological limit, and strychnia by the mouth or, better, hypodermatically, should be combined with this treatment to secure the best results. A nutritious diet and complete rest, both mental and physical, should be combined with this.

In using glonoin the eye-ground should be examined every few days, and if it produces severe papillitis or retinitis, its use should be discontinued until the retinitis has been cleared by absorbents.

NOTE.

May 27. Case I. $V._2$ Rem.$=^4/_5$; V_2 prox. $=$J. 2. Arteries normal in size in all parts of the retinæ of both eyes; paleness of discs much diminished; arteries normal on discs. A peculiar feature in this case, as well as in Case II, is that the cupping of the discs has been greatly lessened by the

glonoin treatment. I can not account for this, but will advance a theory: It is my belief that, in optic atrophy the cause of cupping of the discs is that the contracted condition of the arteria centralis retinæ diminishes the amount of blood passing through the nerve, hence this would make the nerve smaller, and cause a tendency to recede. Now, the glonoin, by increasing the blood-pressure, would expand the nerve and tend to force it forward, and thus lessen the cupping.

May 27. Case II. V. R. E. Rem.=$^4/_4$; L. E. =$^4/_8$. V. prox. R. E.=J. No. 1; L. E.=J. No. 3. Improvement in left eye from J. No. VII, to J. III, in one month. Is taking $^1/_{15}$ gr. strychnia twice daily by the mouth, and $^1/_{60}$ glonoin twice daily. Later on I will give this amount once a day and gradually diminish the dose. Arteries normal in calibre, and paleness of discs greatly diminished. No retinitis or papillitis.

Case I is receiving hypodermic injections of $^1/_8$ gr. strychnia twice a week, with $^1/_{100}$ gr. glonoin by mouth twice daily. I will gradually lessen these doses.

June 6. Case I has been taking glonoin alone ten days, and V.$_2$ prox.= Jaeger No. I.

A CONVENIENT FORM OF FIXATION FORCEPS.

BY DR. LUCIEN HOWE, BUFFALO, N. Y.

The tendency of the eye to roll upward when irritated, is a difficulty attending several operations. In iridectomy, for example, the surgeon, holding the iris forceps in one hand, the scissors in the other, often wishes he might have a third hand with which to rotate downward the eye upon which he is about to operate, which persistently and obstinately rolls upward. At this critical moment the fixation forceps are usually given to an assistant, but it is not always possible to have one trained to rotate the globe without making undue pressure upon it. Indeed, this danger is so great that many operators, when making an iridectomy, direct the patient to look downward, trusting to the chances of his obeying rather than risk the undue pressure which might be made upon the globe. Too often, however, it happens that just as the iris is seized, the patient, in

his fright and sudden pain, loses his self-control, the cornea suddenly flies upward beneath the lid, before the iris forceps cad be withdrawn, and the result is a laceration of the iris or possibly even the dislocation of the lens. In order to avoid this difficulty, various attempts have been made to modify fixation forceps so that the globe could be held down. Some experience with a simple appliance which might be called "self-fixation forceps" has led me to hope that the mechanical difficulty referred to is one that may be overcome. A glance at the simple instrument represented in the accompanying plate shows what it is and how it is used, better than any description that could be given. With the biting end, a considerable fold of the conjunctiva is caught just below the lower margin of the cornea, and the globe, being rotated downwards, the projecting pin on the forceps is caught under the bar which goes from one side to the other of the spring-speculum. Many specula are not provided with these small bars, which are intended to fold back the lashes from the globe, but it is, of course, easy to attach a bar of the fine wire to almost any

of the specula commonly in use. When the fixation forceps are thus made fast to the globe and adjusted under the bar of the speculum it is impossible for the eye to roll upward, and although lateral movements of the globe can be made, they are considerably restricted. I have found, however, that if the bar on the speculum is notched near the center, the projecting pin on the forceps can be slipped into this notch, and thus even movements from side to side are lessened. If one does not care to be troubled with adjusting the pin on the forceps to the speculum, but prefers to have the forceps held by an assistant, this can be done safely and easily by an unskilled hand. In order to hold the globe in any position it is simply necessary to grasp the forceps as they lie on the cheek with the thumb and finger. The hand of the assistant is well removed from the field of operation and it is practically impossible for him to make any pressure on the globe.

OBSERVATIONS CONCERNING THE ENDOTHELIAL LINING OF THE ANTERIOR CHAMBER IN HEALTH AND DISEASE.

[WITH MICRO-PHOTOGRAPHS.]

BY ADOLF ALT, M.D., ST. LOUIS, MO.

[CONTINUED FROM MAY NUMBER.]

III. The Endothelium Covering the Anterior Surface of the Iris.

Although every text-book speaks of the anterior endothelial covering of the iris and many of them of an endothelial "membrane," descriptions of what seems to be the actual contion are, it seems, not to be found.

Since Faber's description was published, it seems to have been adopted more or less by everyone. In my book on the histology of the eye, I took the same stand, based on what I had then seen myself and commended on the difficulty I had experienced in seeing what I thought I could call the endothelium of the anterior surface of the iris. I had tried at that time to isolate its cells in many instances and had in a few succeeded in getting little pieces of a cellular membrane which I thought represented this endothelial coat. I stated then that the endothelial membrane of the anterior iris surface was made up of the flat, polymorphous, mostly quadrangular cells with a large round nucleus and that I had seen such cells arranged tile like, overlapping each other, just as Jul. Arnold had described them. I making these statements I felt, however, constrained to add, that these endothelial cells muct evidently be but very loosely connected with the underlying tissue or the very easily destroyed, which might explain the difficulty experienced in finding them.

I know now, that what I had seen in those days was pathological, and that I have to correct my statements,

The endothelial cells covering the anterior surface of the iris can only be properly seen in the finest sections of this sur-

face. They can not be scraped off in larger masses, except from a diseased iris, when a newformation of tissue has taken place, as we shall see presently.

By making many efforts in this direction I have succeeded in getting a larger number of good surface sections of the iris which show that the endothelial cells do not form a distinct membrane as they do on Descemet's membrane. The cells on the contrary are irregularly distributed over the uneven surface of the iris, but may be traced into all its wrinkles and crypts. (See Figs. 1 and 2). The individual cells vary very much in shape; they are flat, mostly round, or somewhat branched, and have a round nucleus.

In the accompanying photographs (Figs. 1 and 2) it was necessary to retouch these cells with some sepia before the electric reproduction and this is the cause of their dark appearance. As a rule, they do not take up staining materials as well, as the other cells of the iris surface, which are, moreover, naturally pigmented cells.

The difficulty, then, in distinguishing these endothelial cells does not lie in the fact, that they are so loosely connected with the underlying tissue, or so friable, but in that they are so firmly attached to the pigmented underlying tissue. This is, furthermore, made more difficult, since the surface of the iris is so uneven and, therefore, larger continuous views can be obtained only under very favorable circumstances.

In pathological eyes conditions are often found on the anterior surface of the iris which seem to leave no doubt as to the existence of this endothelial covering as well as to the possibility of its proliferation.

Figures 3, 4, 5 and 6 are given in order to show the most conspicuous pathological change I have observed on the anterior surface of the iris, namely a newly formed connective tissue covered, towards the anterior chamber, with a terminal layer of endothelial cells.

It is particularly in eyes which have undergone considerable hæmorrhages and in glaucomatous eyes in which we meet with this newformation. Sometimes it covers only a part of the anterior surface of the iris, as in Fig. 3, which is taken from a glaucomatous eye and in which the newformation lies about midway between the pupillary and the ciliary margins.

In Fig. 4 (taken from an injured eye) this newformed tis-

sue is about half as thick as the iris and covers its whole anterior surface. It is such a delicate, transparent tissue, that it was not observed during life and, yet, it contains a well organized network of capillary and even larger bloodvessels, as is better shown in a section through it and parallel with the iris surface as reproduced in Fig. 5.

In a larger number of cases the newformed connective tissue is most developed at the pupillary edge and its contraction causes the clinically well-known symptom of the ectropium uveæ. In Fig. 4, the section is taken from near the pupillary edge and the uvea may be seen in the corner pulled over the pupillary edge and a good ways outward on the anterior surface of the iris. It so happens that I have been unable to obtain reproducable photographs from the best specimens of ectropium uveæ, that I possess, on account of the staining material used in preparing these specimens. Fig. 6, however, gives a very good idea of the conditions. Here the prismatic sphincter edge of the iris is changed into a thumb-shaped edge by the contraction of the newly formed connective tissue which not only has pulled the uvea forward, but has also bent the sphincter towards the anterior shamber.

In Fig. 3 the covering layer of endothelial cells is somewhat detached from the newly formed connective tissue. In the antero-posterior section these endothelial cells appear spindle-shaped with a round nucleus and their ends somewhat overlap each other in the manner of tiles. This is probably what Arnold and myself have seen formerly.

I am unable to say whether this new tissue is altogether and simply due to a proliferation of the anterior endothelium of the iris; but I think there is no doubt, but what it is in a great measure the result of such a proliferation.

[TO BE CONTINUED.]

THE SIXTY-FOURTH ANNUAL MEETING of the British Medical Association will take place at Carlisle on July 28 to 31. The officers of the Section on Ophthalmology are: President, David Little, M.D.; Vice-Presidents, J. B. Lawford, F.R.C.S., P. M. Maxwell, M.D., F.R.C.S.I. The Honorary Secretaries are: W. M. Beaumont, M.R.C.S.; G. McKay, M.D., and F.R.C.S., Ed.

THE NEW MEDICAL LAW OF OHIO AND ITS RELATION TO OPTICIANS AND JEWELERS.

BY L. R. CULBERTSON, M.D., ZANESVILLE, OHIO.

The new Kimmel Medical Law will probably prevent jewelers and opticians from fitting or prescribing glasses without a prescription from an oculist or physician. Clause *f* of the bill reads as follows:

"Any person shall be regarded as practicing medicine or surgery within the meaning of this act who shall append the letters M.D., or M.B. to his name, or for a fee *prescribe*, *direct*, or *recommend* for the use of any person, any drug or medicine or *other agency* for the *treatment*, cure or *relief* of any wound, fracture, or bodily injury, *infirmity* or *disease*," etc., [italics mine].

Glasses are given for the relief of a bodily infirmity or disease. The ophthalmologists and opticians asked the Board for their construction of this clause. On May 26, the Board asked some of the leading opticians and oculists to appear before them and state their views in the matter. About twenty oculists were present, among them Dr. S. C. Ayres, Cincinnati; Drs. Milliken, Baker and Scott, Cleveland; Dr. F. Clark, Columbus; Dr. Snider, Toledo; Dr. L. R. Culbertson, Zanesville; Drs. Blake, Brown and Wright, Columbus. The first seven named gentlemen made speeches.

Some of the oculists were in favor of stopping the opticians from selling any glasses without a prescription from an oculist; others thought that we had not yet reached the millenium in this business, and that we could not teach the public at once the difference between the oculist and optician, and that the public, particularly old people, would object to paying oculists' prices for simple age glasses, and in some cases it might necessitate their going fifty or more miles to secure the services of an oculist, and that they might not be able to incur this extra expense. The consensus of opinion was that they should be prohibited from selling glasses without a prescription excepting in presbyopic cases.

One speaker stated that they should not be allowed to fit any glasses, because in 99 out of 100 cases the glass was not correct, and not only were the patients' eyes injured thereby, but his pocketbook as well.

The writer stated that it was almost impossible for an optician to give the proper glass—if he did so it was just by chance—because this could not be done unless the eyes were thoroughly atropinized; or the retinoscopic test—the most scientific and and difficult of all tests—was used. Opticians could not use either of these tests. Also, that all eyes should have an ophthalmoscopic examination to determine if there be a disease of the fundus or system. Opticians know nothing of the diseases of the eye.

All contended that their object was not so much to protect themselves (although they need it badly, as their business has been dreadfully cut up by opticians, quacks and Jew fakirs —who go from farm-house to farm-house, peddling worthless glasses at high prices), but to protect the eyes and purses of the ignorant public. The gullible public have the idea that because the optician advertises that he is the man to go to. They can not get it through their heads that we are not permitted to advertise, and half of them think the opticians know more than the oculists.

The oculists thought that if the opticians were permitted to sell age-sight glasses that they would not attempt to injure the law in the courts; and, perhaps, not attempt to get a bill through the next Legislature. The writer thought that differences, if any, could be adjusted by oculists sending their prescriptions to opticians, and if patients could not afford to pay for examination and glasses, then the oculist could charge simply for the glasses (the optician's price) and furnish them himself.

The Board, under advice of their attorney, will give their opinion shortly.

E. A. NESNAMOW recommends the application of iodine in trachoma. He use a one per cent. solution of iodine in liquid vaseline in cicatricial trachoma with infiltrations of the cornea, pannus, ulcers and superficial opacities. In other forms of trachoma he applies a three to five per cent. solution of iodine in vaseline mixed with a small quantity of sulphuric acid.

OPHTHALMIC DIGEST.

By J. ELLIS JENNINGS, M.D.,
OF ST LOUIS, MO.

THE FORMATION OF THE STUMP AFTER AN ENUCLEATION. Geo. F. Suker, (*Annals of Ophthalmology and Otology*, Vol. IV, No. 4).

The *modus operandi* is as follows: Prepare the field of operation as is your custom; divide the conjunctiva as close to the cornea as possible, dissect it as far back as permissible; do the same with the capsule of Tenon. Cut the recti muscles as close to their insertion as possible. Insert into each rectus a black silk suture at the time it is cut. This is to act as a guide. Proceed now as is customary, *i. e.*, severing the nerve and oblique muscles. After removing the eye, take a thoroughly sterilized catgute suture and pass it through the severed end of the rectus externus and internus, which have previously been brought together by the silk suture guides.

Now bring the superior and inferior recti down and pass a catgut suture through them. Finally, suture the four together and remove the silk guides. Thoroughly irrigate your cavity with sterilized water. At the last bring the conjunctiva from above and below over the muscle stump and suture same with a continuous suture, but be sure you fasten it to the muscle stump. Leave only a small part unsutured at either canthal end of the conjunctiva as a provisional drainage opening.

You will, if everything acts properly, have union by first intention and the result will be an excellent prominent stump upon which an artificial eye will fit exceedingly well. This stump permits of much freer movement of the shell than any other, and then, too, it does away, more or less, with the extreme sunken appearance of the socket after an enucleation. You are also apt to preserve a much better caruncle than is obtained by the other operations, thus doing away with the special appearance of the shell.

ON THE PREPARATION OF MACROSCOPICAL EYE SPECIMENS.

WILLIAM CAMPBELL POSEY, M.D., Philadelphia (*Annals of Ophthalmology and Otology*, Jan., 1896).

The method of preparing the eye specimens is that of Mr. Treacher Collins, of Moorfields, London, and is practically the same as that which was introduced by Mr. Priestly Smith. The glass jars which I employ have been made for me by the Fox Optical Co., and consist of a simple glass jar which is capped with a plano-convex lens. A small disc of opaque glass is used to seal the jar, and forms an excellent background for the specimen. The whole is mounted on a small block of wood.

The preparation of the eye for mounting is briefly as follows: The entire globe is hardened in Müller's fluid for at least three weeks. It is then placed in a freezing mixture of salt and ice, care being taken to envelop the eye in oiled silk to prevent any of the fluid from the freezing mixture coming in contact with it. After the globe is thoroughly hardened, it is divided by a bold stroke of a knife, that form of knife used in sectioning the brain being the best adapted for this purpose. One-half of the eye is reserved for microscopic examination, while that which is to be mounted macroscopically is placed in water to thaw out and to rid it of the excess of Müller's fluid. To remove the stain caused by the fluid more effectually the section of eye is then placed in a five per cent. solution of chloral hydrate, care being taken to change the solution daily until the section is no longer discolored. As the globe would shrink were it placed in the mounting fluid in this stage, it is first subjected to solutions of glycerin and water of different strengths (one to three for twenty-four hours and then one to two for twenty-four hours, J. E. J.). The eye is then ready for mounting.

The preparation of the medium used for this purpose is the only difficult stage in the entire process. It is quite a painstaking task to obtain a clear solution, and one frequently consumes three or four hours in the process to be rewarded by a product which is too cloudy for use. The solution is best prepared as follows: One ounce (about twelve to fourteen strips) of the best French gelatin (Coignet & Co., Paris) is cut into small bits by a pair of scissors, eight ounces of water are

then added to the gelatin, and the mass set aside in a beaker to swell. The whites of two eggs are then taken, and to better clear the mixture later on, the shells of the eggs are cut into fine pieces and thoroughly mixed with the albumen. The gelatin is now melted with a gentle heat, a few drops of carbolic acid being added as an antiseptic. As soon as it is beginning to boil the albumen is added, and the whole mass stirred with a glass rod. As the mixture is very readily scorched, constant attention must be given it until the fluid is quite clear below and a thick scum has gathered upon the top. The mixture is now filtered through flannel, or preferably through a steam filter, and the product which should be quite clear is collected in a jar which has been made perfectly clean. Eight ounces of glycerine are then added. After the glycerine and jelly have been thoroughly mixed, one of the glass cells is two-thirds filled with the solution, and the section of the eye floated upon it. The globe is then seized at the equator with a pair of forceps and gently rolled over in such a way that no air bubbles are permitted to get into its concavity. Should any bubbles, however, get in, they can be readily removed by sucking them out through a glass tube. A hand-mirror is now placed under the specimen and a good view is obtained of the position of the eye, and of any air bubbles which may have escaped detection from above.

The globe is then kept from rising in the fluid by placing over it a bit of card-board, perforated by a pin. The jar should never be entirely filled with the solution, for it is always better to leave an air space between it and the opaque disc which is cemented on after the jelly has thoroughly set.

A CASE OF SYMPATHETIC OPHTHALMIA FROM IRIDECTOMY. D. L. LEDBETTER, (*Annals of Ophthalmology and Otology*, Vol. IV, No. 4).

The patient, a young girl 17 years of age, had cataract in both eyes. The right eye was needled and after four operations the patient could read ordinary print with glasses. Six months later the left eye was needled and the patient allowed to go home. She was gone a month and when she returned I found there had been an iritis following the operation. There

was complete synechia and occlusion of the pupil. The eye was treated until the inflammatory symptoms had all passed away, and then an effort was made to detach the iris from the capsule of the lens. The pupil, however, would not dilate under mydriatics and the result was negative. When the irritation had subsided I did an iridectomy, hoping to get some relief in this way. The reaction was slight and the patient was allowed to go home. Three months later she returned when I found that my coloboma was obliterated and the pupillary margin drawn up toward the corneal cicatrix. There was considerable ciliary congestion of left, with serous iritis of the right eye. Ophthalmoscopic examination of the right eye was very unsatisfactory on account of the cloudiness of the media. The lower section of the cornea presented a triangular punctate appearance. There was some photophobia and slight sensitiveness to pressure in both eyes. The patient was kept under close observation for five or six weeks, but the eyes continued to show some ciliary irritation; the punctate appearance of the cornea remained and the lymph deposit in the pupil of the right eye was getting more and more dense all the time. It was decided to enucleate the offending eye and after its removal the other cleared up very rapidly, and the punctate appearance of the cornea was soon gone, but the lymph deposit remains and the vision is considerably impaired, the patient counting fingers at a few feet but sees enough to get about comfortably. I hope to be able to improve the vision by a division of the membrane, when the eye has entirely recovered.

DR. D. C. PIPINO, a prominent oculist and aurist of Des Moines, Ia, was thrown from his horse and killed a few days ago. The doctor, whom we had occasion to see only a few months ago at the meeting of the Western Ophthalmological, Otological and Laryngological Society, where he was elected Second Vice-President, had been located in Des Moines for a number of years. By his gentlemanly and refined manner, his practical and scientific attainments and his public spirit, he soon succeeded in gathering a large clientèle. He leaves a wife and two children, who have our deepest sympathy in their sudden and shocking loss.

PLATES TO DR. ALT'S PAPER.—Pages 168–170.

Fig. 3.

Fig. 2.

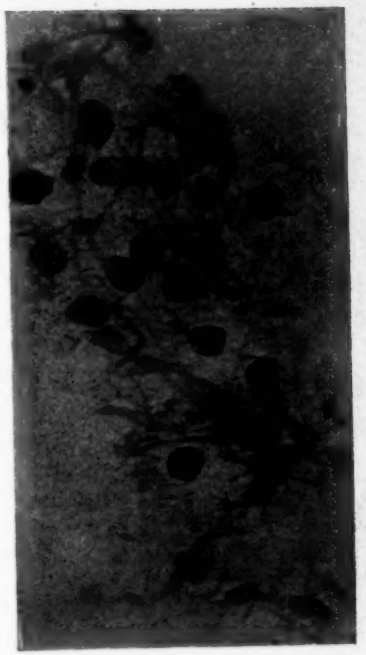

Fig. 1.

FIG. 6.

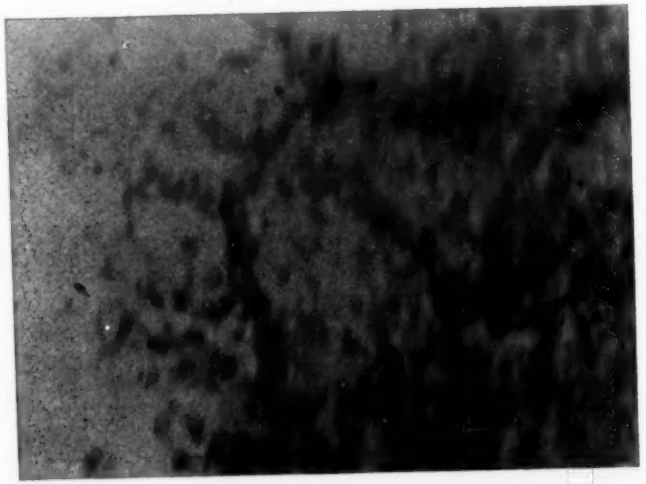

FIG. 5.

FIG. 4.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

OPHTHALMOLOGICAL SECTION.

ATLANTA MEETING, MAY 5, 6, 7 AND 8, 1896.

Reported by DR. H. O. REICK, Baltimore.

1.—*Address of the Chairman.* Dr. Lucien Howe, Buffalo.

I feel impelled to ask your attention briefly to a growing tendency among us to regard difficulties of the accommodation and muscular apparatus as entirely local. I would fain say a word for that nearly forgotten factor, the "general health." We look upon the causes of asthenopia as more local than general, because we see such a large proportion of cases which require only local treatment. Many cases exist, however, which in spite of most accurate correction of the refraction and muscular balance still suffer from asthenopia. In these cases the condition of the blood, of nutrition and of the nervous organization have much to do with the trouble and should be carefully looked after.

2.—*The Nomenclature of Conjunctivitis.* D. S. Reynolds, Louisville, Ky.

According to the intensity of the inflammation and the character of the infection, the pathological conditions vary, and it seems more rational to designate the varying types of conjunctivitis according to their pathological characters; for, as these vary there should necessarily be employed varying modes of treatment. I should make two general divisions—traumatisms and infections, and subdivide these into primary and secondary groups and each group into species according to the part of the membrane affected or the character of the infecting organism.

3.—*Sub-Conjunctival Injections.* E. J. Bernstein, Baltimore, Md.

These points are worthy of consideration: First, observance of every practical aseptic precaution; second, thorough anæsthesia of conjunctiva with four per cent. cocaine solution; third, use of cyanide of mercury instead of sublimate; fourth, the injection is to be made *sub-conjunctival*, and *not* under Tenons capsule. The action of drugs injected is intensified and it is a more exact method of dosage.

Discussion:

DR. G. E. DE SCHWEINITZ, Philadelphia.—I have tried the injections and believe they should have a permanent place in ophthalmic therapeutics, but not to the exclusion of constitutional measures. They are very valuable in any variety of iritis provided there is not high inflammatory action. In neuritis and episcleritis they act promptly, but I would suggest that relapse is more likely to occur than where ordinary constitutional measures have been thoroughly employed. I have obtained the same results whether bichloride solution or salt solution was used.

DR. G. C. SAVAGE, Nashville, Tenn.—I have used the bichloride solution but found it too painful. No matter what else may be used in treating iritis, atropia should not be neglected.

DR. C. H. BAKER, Cleveland, Ohio.—I have used the injections in combination with the accepted methods of treatment and had excellent results in a number of cases, especially of interstitial keratitis and central choroiditis.

DR. DUNBAR ROY, Atlanta, Ga.—I have found this method of treatment of service in my hospital work where I have to deal with, mainly, colored people. It is cheaper than dispensing medicine and I am sure the remedy is being used.

DR. BERNSTEIN.—I have had no experience as yet with relapses. Of course, neither atropia nor general treatment are to be left out in iritis.

4.—*A Case of Ectropion of the Upper and Lower Eyelids.* Dr. F. C. Hotz, Chicago.

The patient was a boy of fourteen with complete ectropion of the upper lid of the left eye and both lower lids, the result of caries of the orbital margin when four years old. Operation on the upper lid, only of interest. I made a skin

flap from the cicatricial skin in the vicinity of the upper lid and fastened it with sutures. The wounded surface above was then covered by a flap from the temporal region. The operation supplies the lid with a thin light skin, which adapts itself to the configuration of the lid, and does not restrict its movement. The new lid skin being fixed to the tarsal cartilage makes it independent of tissue contraction.

5.—*Report of a Case of Detached Retina, Occurring in Chronic Bright's Disease.* Dr. L. F. Lane, Philadelphia.

C. D., female, 54 years of age, applied for treatment October, 1892. Had always enjoyed good health. Lately slight headaches and dyspnœa on exertion. Mother of five children; no miscarriage. Menopause at 46. Four years ago her vision failed suddenly in the right eye. About two weeks ago she noticed dimness in the left. Present vision R. E. V.=fingers at ten inches; L. E. V.=$^{20}/_{LXX}$. Ophthalmoscope R. E., fine floating opacities in the vitreous, nerve atrophic, general retinal œdema and detachment above and below. L. E., lens hazy. Disk red-gray. Hæmorrhagic extravasation in macular region and a few white plaques above the disk. Urine, specific gravity 1018, albumen, hyaline casts, pus cells and blood corpuscles. Under care of Dr. J. C. Wilson she improved in respect of headache and restlessness. When seen three years later her condition was about the same at at first visit.

6.—*The Field of Fixation and Its Relation to Heterophoria.* Dr. Casey A. Wood, Chicago.

The field of fixation of an eye includes all those points which the eye can successively fix, the head being completely at rest, while the limits of the field represent the extreme excursions of the eyes in all directions. What we desire to know in practice, however, is not the extreme limit of rotation of the eye so much as its limit of observation, whether or not the various muscles alone and in combination are capable of making all the excursions required for the purpose of securing and maintaining single and binocular vision. These considerations led me to attempt to remedy what seemed to be certain defects in the technique of determining the field of monocular fixation. The most effective plan so far employed is the modi-

fied Landolt apparatus attached to the McHardy perimeter. I have found in this method though, that the long continued effort necessary is very fatiguing to the patient, and the results are thus badly influenced. Instead of using an object attached to the carrier on the perimeter arm I have used a simple device whereby the rotation of the globe in any direction can be easily and quickly measured. Four strips of paper with words of two letters printed on them are placed between as well as below the figures representing the degrees of latitude on the perimeter arc. These strips are together placed in position on the arm of the perimeter, the patient's head is placed in the primary position and he is asked to read the lower line as far away from the center as possible. He is then asked to give the figure above the word just recognized and try to read further out other words on the figure line. Each word represents one degree on the scale, and the number of words so read added to the previous figures gives the limit of the field in that direction. As each quadrant of the circle is passed over, the slip is removed, showing a new one of different lettering. I feel justified in thinking that where carefully done the defective excursions, and often the special muscle, or muscles, can be detected by a glance at the perimeter chart.

Discussion:

DR. G. C. SAVAGE, Nashville —In my judgment the paper is one of great interest and importance, and I have not heard a paper for a long time that gave me as much pleasure.

DR. D. S. REYNOLDS, Louisville, Ky.—I appreciate the importance of the subject and the practical character of the paper and think we will all be better prepared to discuss it having studied the paper in cold type.

7.—*Etiological Factors, Other than Myopia in the Production of Retinal Detachment.* Dr. H. O. Reik, Baltimore.

In a study of the fifty per cent., or more, of cases not due to myopia we are compelled to attribute their origin to quite a variety of causes. Among these we may number, in their order of frequency, trauma, Bright's disease, or the albuminuria of pregnancy, hæmorrhages, tumors, diabetes, sunstroke, and neuralgia of the fifth nerve. Despite the greatest care taken, however, in examination, there still remains a large percentage in which no cause for the lesion can be ascertained. Though

the immediate cause of displacement is so obscure, it is probably safe to say that the vitreous is always the seat of pathological alterations, though such changes may not be, and often are not apparent by ophthalmoscopic examination.

8.—*The Anatomic Changes in Two Cases of Retinal Detachment.* Dr. R. L. Randolph, Baltimore, Md.

The chief points about the pathological anatomy of the first case, were: First, the widespread atrophic degeneration of the retinal layers, especially the layer of rods and cones; second, the swelling of Müller's fibres; third, the presence of albuminous drops in various localities, especially the choroid and the retina along the neck of the detachment, and finally the transformation of the vitreous body into fibrillæ. The principal changes in the second case, were, the conversion of the vitreus into fibrillæ and the atrophic degeneration of the anterior layers of the retina. This condition of fibrillary degeneration probably exists to some extent in every case, and is the chief element in the pathogenesis of the disease.

9.—*The Treatment of Retinal Detachment.* Dr. Casey A. Wood, Chicago.

Dr. Wood reviews the various methods proposed from time to time for the treatment of this affection, and describes in particular the recently suggested operation of Deutschmann, incision of the vitreous fibrillæ and injection of sterilized rabbit's vitreous. He then concludes that we have no better device as yet than that resorted to with occasional success by the older ophthalmologists, rest, bandage and diaphoretics. So numerous and well authenticated are the cases of spontaneous recovery reported, I can not help thinking that a large percentage of the results obtained after use of the various methods, are really brought about by local and general rest.

10.—*Electrolysis in the Treatment of Detached Retina.* Dr. W. T. Montgomery, Chicago.

One of the most recent measures brought forth for the treatment of detachment is electrolysis, and a most encouraging report of its use has been made by Dr. Terson. Dr. Bettman and I have recently tried it according to Dr. Terson's

recommendation in four cases, and if we are warranted in drawing conclusions from such a meagre report, they are: (1) that the treatment is exceedingly painful; (2) that it is valueless as a curative agent; (3) that it may be a factor in exciting inflammatory glaucoma as occurred in second case.

Discussion of last four papers:

DR. J. A. WHITE, Richmond.—The Committee is to be congratulated upon the completeness of its work. I quite agree with the authors that we are still in need of good methods of treatment. I have watched some cases from their very beginning and nothing availed to check them.

DR. LYMAN WARE, Chicago.—In regard to the use of electrolysis, is it rational treatment to use the positive pole? The negative is the one that has been supposed to produce absorption.

DR. A. R. BAKER, Cleveland, O.—I wish we could have a more scientific classification of these cases. Simply to call them detachment is not enough, for often the displacement is only an incident in the affection.

DR. G. E DE SCHWEINITZ, Philadelphia.—I deprecate the report of cases of detachment submitted to operative interference before sufficient time has elapsed to test the sufficiency of the cure. I remember one case reported as cured by another physician and at the time the report was given out the patient was in my hospital for treatment. I would suggest that Deutschmann's result in human beings with injections of sterilized vitreus be repeated in animals.

11.—*Report of One Hundred Cataract Cases.* Dr. Lyman Ware, Chicago.

When there is no disease of the eye aside from cataract and when the patient is reasonably tractable every operation ought to be a success. Dr. Ware reviews some of his cases, reports five par cent. of failures, and says that he favors thorough antisepsis with bichloride of 1-5000, a preliminary iridectomy in most cases and a large corneal section. A tabulated report of the cases goes with the paper.

Discussion:

DR. W. T. MONTGOMERY opposed the use of bichloride because of the irritating properties, and favored preliminary iridectomy only in exceptional cases.

DR. A. C. CORR.—I regard the preliminary iridectomy as so important and necessary to an ideal operation that if I were to have to submit to cataract extraction I should require this method.

DR. J. A. WHITE.—I would indorse all that Dr. Ware has said and believe that if you are working only to secure to the patient every possible chance for vision, it is advisable to do preliminary iridectomy in every case.

DR. H. B. YOUNG, Burlington, Iowa, advocated the simple extraction.

DR. G. C. SAVAGE.—The ideal operation in my judgment has not yet been perfected, that is, the extraction of the lens in its capsule without iridectomy. At present I always start out with the intention of doing simple extraction, and always regret having to perform the combined operation.

12.—*Cases of Optic Nerve Atrophy of Obscure Origin Occurring in General Diseases.* H. V. Würdemann, Milwaukee, Wis.

Optic nerve atrophy occurs in general diseases usually as the direct result of their toxins causing inflammation with the resultant interstitial changes, or, through micro-biotic changes in the bloodvessels affecting the nutrition of the nerve and retina. A certain proportion of cases are due to trauma and to lesions which cause pressure on the nerve, or interfere with its nutrition through embolic processes. I think, in the majority of cases, it is possible to demonstrate a sufficient exciting cause.

13.—*Optic Nerve Atrophy from Toxic Agents.* Dr. G. E. de Schweinitz.

The baneful influence of certain toxic agents falls particularly upon the papillo-macular tract and there results an augmentation of nuclei, and hypertrophy of the connective tissue and a wasting of the nerve fibres, the process being most intense according to Sachs, in one small area which he calls the nuclear group. There is in fact an interstitial sclerosis in every way comparable to the pathologic processes in interstitial hepatitis. Tobacco is *facile princeps* among deleterious agents, but similar amblyopias may be produced by alcohol, stramonium, canabis Indica, chloroform, opium, bisulphide of carbon, nitro-benzol, etc. Pure cases of toxic amblyopia are

distinct from retro-bulbar or axial neuritis. While the lesion in tobacco amblyopia is assumed to be similar to that found in mixed cases we are not yet in possession of an autopsy to prove it.

14.—*Optic Nerve Atrophy of Obscure Spinal Origin.* Dr. G. Dunbar Roy, Atlanta, Ga.

A review of cases reported showing the relation which exists between optic atrophy and such diseases as meningitis, locomotor ataxia, multiple sclerosis, lateral sclerosis, trophoneuroses, chorea and injuries of the spinal cord.

15.—*Differential Diagnosis Between Simple Glaucoma and Optic Nerve Atrophy.* Dr. B. Alexander Randall, Philadelphia.

As a rule such a diagnosis, of course, gives no difficulty, but Dr. Randall showed by pictures thrown on a screen that cases do exist in which the most expert ophthalmologist might be puzzled to determine the difference.

Discussion of Optic Atrophy:

DR. C. A. WOOD thought that alcohol was more likely to be the principal cause of toxic amblyopia than was tobacco, because we know how frequently it produces nerve lesions elsewhere in the body while tobacco rarely does so.

DR. G. C. SAVAGE thought that there should be no difficulty in deciding between glaucoma and atrophy in any case.

DRS. BAKER and WOODSON reported cases of tobacco amblyopia. Dr. Baker spoke of sunstroke as a cause of atrophy, and Drs. Hobby and Short related cases due to injury.

16.—*Idiopathic Choroiditis.* Dr. Adelaide E. Portman, Washington, D. C.

DR. PORTMAN called attention to a class of cases in which no specific taint could be discovered and to which the above name was applied to remove them from the suspicious class.

17.—*Bilateral Exophthalmus.* Dr. H. B. Ellis, Los Angelos, Cal.

A very interesting case, but too long to report here.

18.—*A Contribution to the Question of Removal of the Lens in Myopia.* H. H. Harlan, Baltimore, Md.

DR. HARLAN reports the case of a woman, aged 45, with

progressive myopia which caused loss of vision in the left eye. When 13 years old, the right eye was injured, traumatic cataract, the lens was absorbed and the vision in the right eye is now $^{20}/_{L}$ without glasses and there is no fundus trouble apparent. Would an early operation have saved the left eye?

Under discussion, Dr. C. A. Wood reported a case upon which he had operated four years ago with good results.

19.—*Results of an Examination of the Vision of the Children in the Public Schools of Baltimore.* Drs. Harlan and Woods, Baltimore.

The plan pursued in making the examination was practically the same as that devised and published by Dr. F. Allport, of Minneapolis, more than a year ago. Good results are reported and much benefit to the children is expected to be derived in the future.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

EDWARD NETTLESHIP, F.R.C.S., President, in the Chair.

THURSDAY, MAY 7, 1896.

CLINICAL EVENING.

RESTORATION TO NORMAL VISION AFTER SYMPATHETIC OPHTHALMITIS.

This case was shown by MR. CRITCHETT. An attempt was made to save an eye which had been injured by a nail; the cornea and lens had been wounded; the attempt failed, and the eye was excised thirty-five days after the accident. Twelve days after the excision of the injured eye the other eye became inflamed, and vision was reduced to $<$ fingers. Under the use of atropine and mercurial inunction the inflammation subsided gradually, and the vision was eventually restored to normal.

Extraction of a Dislocated Lens With Good Result.

This case was also shown by Mr. Critchett. Two months before her visit to the hospital a middle-aged woman received a blow on the right eye by which the lens was displaced downwards. The left eye had been injured twenty-three years before; at that time there had also been an attack of inflammation in the right eye. The dislocated lens was removed with a vectis; there was no loss of vitreous, and vision was eventually $^{5}/_{LX}$. The section was within the cornea. The vectis was preferable to the spoon in some cases, as it sank into the lens and held it more securely.

The President thought Mr. Critchett's second case was another instance of recovery from sympathetic ophthalmia. This added to the interest of the operation that had been performed.

Optic Nerve Disease in a Mother and Three Children.

These cases were shown by Dr. R. D. Batten. The mother's sight had failed when she was 12 years old; one of her sisters, aged 33, had the same affection, also one brother. In the mother's case the vision was reduced to $^{1}/_{LX}$; the optic discs were atrophic, there was slight contraction of the visual field. In the younger generation one boy and two girls were affected; their sight had failed at about 12 years, the same age as the failure in the mother's case. In the boy vision was $^{6}/_{XVIII}$, and there was a central scotoma. In the eldest girl there was pallor of discs, several scotomata, and color blindness. In the other girl the signs were less marked. There was no other disease in the family.

Spurious Optic Neuritis.

This case was shown by Mr. Holmes Spicer. The patient was a boy, aged $11^{1}/_{2}$ years, whose refraction in each eye was emmetropic, and whose vision was $^{6}/_{VI}$. His visual fields were normal; his light and color sense were normal. Both optic discs presented the appearance of the early subsidence stage of severe optic neuritis; their edges were quite indistinct; they were very pale; there was swelling amounting to about 3 D. The patient had been under continuous observation for three years, and there had not been the slightest change in the appearance of the optic discs.

MR. HARTRIDGE objected to the term "spurious;" he thought it was a case of persistent optic neuritis, in which the macular fibres had escaped.

DR. R. D. BATTEN was reminded of those cases in which a tilting of the optic disc gave rise to an appearance of neuritis on one side only.

MR. MARCUS GUNN asked if a case of this kind had been seen in which recovery had taken place; he had seen it once in an adult.

MR. SILCOCK had watched a case of this kind lately in which the patient had been thought to have a cerebral tumor; she had been under observation now for a long time, and the appearances were unchanged.

MR. ADAMS FROST did not think the long persistence of the appearances without change excluded optic neuritis.

MR. HOLMES SPICER, in reply, said he regarded the condition in this case as a physiological one, simulating optic neuritis; if it were inflammatory it would be necessary to assume that serious inflammation could last for years without producing any impairment of function in such a delicate structure as the optic nerve.

LYMPHANGIECTASIS OF THE EYELIDS.

DR. D. MOWAT showed a case. A small, soft, ill-defined swelling had first appeared in the lower lid; it increased slowly for some months, then spread to the upper lid. The swelling could be displaced from one lid to the other by pressure; if pressure was made on both lids the swelling appeared behind the ear of the same side; there were communicating channels over the zygoma. The swelling had steadily increased so that it was no longer possible to transfer the fluid from one part to another.

ONE-SIDED PARALYSIS OF SIXTH NERVE ASSOCIATED WITH CONTRACTION OF ORBICULARIS AND RETRACTION OF THE GLOBE ON INWARD ROTATION.

This case was shown by MR. MACLEHOSE. It belonged to a definite group of cases, of which he had seen several which all presented the above signs with some variations. Although he called it paralysis of the sixth nerve, he thought

the condition was congenital, aud depended on variations in nerve supply or muscular development.

Transplantation of Skin to the Surface of the Eyeball for the Cure of Symblepharon.

This case was shown by Dr. Bell Taylor. A man, aged 40, had symblepharon following a burn by hot slag. The lower lid was firmly adherent to the globe, covering the lower third of the cornea. Repeated attempts to secure separation of the adherent tissues by the usual methods failed. Eventually the lid was dissected off the eyeball, and a piece of skin from the upper eyelid of the uninjured eye was transplanted on the surface of the globe, to which it readily became united.

Posterior Lental Opacity, Remains of Hyaloid Artery and Coloboma Lentis.

This case was shown by Mr. Cartwright. The coloboma of the lens was upwards and outwards; the suspensory ligament was attached to the remains of the fibro-vascular sheath.

Detachment of the Retina Treated by Drainage.

This case was shown by Mr. Eve. A young man showed evidence of choroiditis and vitreous opacities before Christmas; in February the retina became suddenly detached. Treatment by iodide of potassium, pilocarpin, and the recumbent position had no effect. An incision into the sclera was made, a trochar and canula were inserted, the fluid withdrawn, and a horsehair drain placed in the eye. Seven weeks after no detachment could be made out, and the visual field was normal.

Case of Proptosis, OpticAtrophy, and Ophthalmoplegia.

This case was shown by Mr. Marcus Gunn. A female, aged 67, suddenly had proptosis of the right eye. The third, fourth, and sixth nerves were paralyzed, the optic nerve was atrophied, the pupil was dilated and inactive, the conjunctiva œdematous. He thought the case was probably one of hæmorrhage from an aneurism of the ophthalmic artery.

Mr. Eve had had a case with a similar history, which proved to be a pulsating sarcoma of the back of the orbit.

MISCELLANY.

HONORS TO DR. L. HOWE.

The French Congress of Ophthalmology held its final meeting yesterday, the President being Dr. Lucien Howe, of Buffalo, N. Y. It has so long been laid to the charge of French physicians that they were inclined to jealousy of their foreign confrères that the choice of an American to occupy the chair at the last session of the Congress must be regarded not only as an effectual disproof of this accusation but also as a mark of hospitality and courtesy to the United States.

Dr. Howe accepted the honor in that spirit, declaring that he looked upon it rather as an honor to his nation than to himself.

One of the most commendable things that have occupied the attention of the Congress was the question of the precautions to be taken to prevent ophthalmia of the new-born children by legislative action. Dr. Howe, who brought forward the question, stated that in America laws have been passed in several states to punish midwives by imprisonment and fine if they do not give prompt notice to the medical authorities of the occurrence of this disease in new-born children, which is well known to be the most important of the causes of blindness.

French oculists do not think that it would be possible in this country to pass such laws, although they have no doubt that one or two punishments of offending midwives would do a world of good.

Before the Congress closed a committee was appointed to consider the question.

The foreign oculists at the Congress included Dr. Bull.--*N. Y. Herald*, Paris.

COLOR-BLINDNESS AND ATAVISM.

A recent writer, M. Dubois, throws out a suggestion that will probably be new to most of our readers. It is recognized

by astronomers that there are three classes of stars—first, the bluish-white stars, of which Sirius and Regulus are examples. More than half of all known stars belong to this class. In these stars combustion is at its maximum, and their atmosphere consists of superheated hydrogen and certain metallic vapors. The second class, of yellow stars, has for typical representatives Capella and our own sun. They are less hot than the first class, and the hydrogen lines in their spectrum are not so conspicuous as in the case of the white stars. This class contains about 33.5 per cent. of all known stars. The third class are the red stars, and of these Betelgeux is the representative. They are in a later stage of cooling than the second class, and the violet rays are deficient. This class includes about eight per cent of known stars. From these known facts it is conjectured that color-blindness (or insusceptibility to the red rays of light) may possibly be a case of atavism—a "negative inheritance from that time long ago when the eye of our ancestors was not yet sensitive to red rays, which were almost entirely wanting in the white stage of the sun." This is a startling theory, but it suggests a plausible explanation of what is such a mysterious fact—viz., that color-blindness should so uniformly take the form of insusceptibility to the red rays. Atavism is without doubt a principle of wide application, and may be fairly relied upon to explain many apparently inexplicable facts. We will not venture to pronounce upon the correctness of its application in the present instance, but at least the theory is a bold and ingenious one, and, if accepted, would tend toward that unifying of knowledge which is the aim of science. Color-blindness, regarded as an isolated phenomenon, is mysterious, but if it be a case of atavism it takes its place in the scheme of ordered knowledge.—*The Lancet.*

THE CRYPTOSCOPE.

Our special correspondent in Rome writes: At a meeting of the Perugia Medico-Chirurgical Society held on February 5, Professor Salvioni, teacher of Physics at the University, made a most important communication on the new results obtained by him in Roentgen's rays. In studying the question,

his aim was to invent an apparatus which would enable one to see direct and without the intervention of photography certain bodies enclosed in wood, flesh, cardboard, etc. He, therefore, studied the possibility of rendering the retina sensitive to Roentgen's rays. In this he has succeeded by inventing an apparatus which he has called a cryptoscope, which he exhibited at the meeting, and by means of which one can clearly see the contours of the bones of one's own hand, objects enclosed in cardboard boxes, leather purses, etc. This apparatus is very simple, and consists of a black cardboard tube enclosed at one end with a disc of black cardboard coated internally with a fluorescent substance (barium platino-cyanide, sulphate of calcium, etc.); in the other end is placed a lens which permits one to clearly see the fluorescent surface. The object to be observed is placed before the luminous source given by a a Crookes' tube, and then one looks at it through the cryptoscope placed at a suitable distance. As in the fluorescent cardboard the parts of the object impermeable to Roentgen's rays are drawn in shadow, thus one clearly sees the contours of the bones of the hand, etc. A model of the instrument was made under the direction of Professor Blasema at the Physical Cabinet of the Roman University on February 11, and with it one could clearly see the bones of one's own hand, coins in a purse or the clenched hand, etc. It is evident from these results that the apparatus, when perfected, will be of great use in medicine and surgery.—*British Medical Journal.*

PROFESSOR EXTRAORDINARIUS OF OPHTHALMOLOGY, O. SCHIRMER, at Greifswald, Germany, was given the title of Ordinarius.

THE THIRTY-SECOND ANNUAL MEETING of the American Ophthalmological Society will be held this year on Wednesday and Thursday, July 15 and 16, at the Pequot House, New London, Conn.

"Journal of Eye, Ear and Throat Diseases. Quarterly. Published by the Surgical Staff of the Presbyterian Eye, Ear and Throat Charity Hospital, Baltimore, Md. Edited by F. M. Chisolm, M.D., and J. R. Winslow, M.D. We have received the first number of this journal and wish it success.

BOOKS AND PAMPHLETS.

NOUVEAUX ÉLÉMENTS D' OPHTALMOLOGIE (New Elements of Ophthalmology). By Drs. Truc and E. Valude. First Volume with 149 Figures and Color-Plates. Paris: A. Maloine. Price, 20 francs.

A neatly gotten up volume. The new in it is chiefly the arrangement of the text-matter, by which the authors hope to aid greatly in the teaching of ophthalmology. It contains a so-called history of ophthalmology and a chapter on microscopical examination of the eye and on its bacteriology.

The second volume is promised for June.

PAMPHLETS.

"The Pathfinders." By J. T. Jelks, M.D.

"Ophthalmia Neonatorum." By W. Cheatham, M.D.

"The Relation of the Thyroid Gland to Certain Diseases of the Ear, with a Theory of Its Function. By E. D. Spear, M.D.

"Cases illustrative of different forms of color-blindness." (1) Congenital; (2) Tobacco; (3) Traumatic. By W. Thomson, M.D.

"Merck's 1896 Index—An Encyclopedia for the Physician and the Pharmacist." New York: Merck & Co. Second Edition. Price, $3.00.

Pan-American Medical Congress.—Professor Dr. Don Francisco Bastillos, Calle de Tacuba No. 7, Ciudad de Mexico D. F. Republaca Mexicana, has been elected Treasurer of the Second Pan-American Medical Congress to be held in the city of Mexico beginning the 16th of November. All members residing in the United States and Canada, and others who contemplate attending, should forward the registration fee, $5.00, gold, to him at once, and notify Dr. C. A. L. Reed, of Cincinnati, Ohio.